Texas Environmental Flows Science Advisory Committee
Wednesday, September 9, 2009
9:30 a.m. – 3:00 p.m.
Texas Commission on Environmental Quality
Building F – Room 2210
Austin, Texas

MINUTES

Call to order and Approval of meeting minutes from August 5, 2009

SAC Chairman Bob Huston called the meeting to order. Members approved the minutes from the August 5, 2009 meeting unanimously.

Liaison reports on BBEST meetings

George Ward gave an update on their activities from their August 20, 2009 meeting. He gave an overview of the presentations made by contractors on hydrology, biology, as well as a study being performed by the National Wildlife Federation (NWF) on Rangia. He suggested that Norman Johns, NWF, give an update on this study at the next SAC meeting. He also relayed to the SAC the request by the BBEST for guidance on application of the various overlays.

Fred Manhart gave an update of the September 2, 2009 meeting of the Trinity/San Jacinto/Galveston Bay BBEST, as well as an overview of the workshop held on September 3, 2009. He noted that the BBEST had received a final report from their contractor looking into the hydrology component of environmental flows within their basin, and briefly discussed the BBEST's proposed budget for the next fiscal year. He also noted that the Freshwater Inflow Subcommittee of this BBEST was meeting today as well, and the Instream Flow subcommittee would be meeting tomorrow, September 10, 2009.

Budget Update

Dr. Ruben Solis, TWDB, explained that he and his staff had been working with both the SAC and the two BBEST groups on how to and how much money to allocate to the groups for continuing work over the next biennium. Budgets were outlined for the 3 existing groups as well as the two basin groups, the Colorado/Lavaca and the Guadalupe/San Antonio, which are expected to be formed within the next few months. He noted that the draft budget had been sent to the Environmental Flows Advisory Group and the chairs of the 3 existing groups.

Galveston Bay BBEST B&E Workshops

Dr. Paul Montagna gave an update on the activities of the Trinity/San Jacinto/Galveston Bay Freshwater Inflows subcommittee. He noted that he committee had held two workshops to discuss and develop their proposed salinity zonation approach, but there was still much work to do. He indicated that the preliminary data analysis did not show a clear statistical relationship between freshwater inflows and salinity, and~~but~~ that this relationship might~~could~~ be better predicted using TxBLEND. He further discussed the group's efforts in trying to identify species that are restricted to a certain salinity zone and the group had chosen several species as focal species to look at during this analysis. BBEST Chairman Bill Espey indicated he would like to continue meeting~~meet~~ with Dr. Montagna to discuss his concerns with their approach.

SAC Chairman Huston noted that he expects the SAC to revisit the guidance documents and stated that the SAC should remain~~be~~ involved in the development of recommendations by the BBESTs, and explore ways~~including how~~ to properly structure that ~~type of~~ involvement.

Sabine Hydrology work

Jon Albright, Freese & Nichols, gave an overview of the hydrologic analysis work he performed for the Sabine/Neches BBEST and his personal thoughts on application of his results. He explained that the BBEST had selected 12 gage stations and those stations fit well with the methodology outlined in the Geographic Extent SAC guidance document. He further explained that he had run the HEFR analysis at all stations for 3 periods of record: ~~1)~~ the entire period of record, pre-impoundment, as well as post impoundment. He also gave an overview of the WAM modeling he had done, indicating he had used WAM Run 8 (current conditions) and WAM Run 3 (full authorization). In those runs he looked at naturalized, regulated, and unappropriated flows and suggested that the regulated and unappropriated flows can be used to develop an environmental flow regime. SAC members and agency staff asked questions regarding the WAM results to which he responded. He discussed qualifying pulses and explained that the frequency-based pulse criteria met more often than percentile-based criteria.

Sam Vaugh, HDR and Sabine/Neches BBEST member gave an overview of his hydrologic modeling results, presenting an example environmental flow regime with the HEFR matrix implementation. In his use of the HEFR matrix he focused on two concepts: 1) example implementation of HEFR matrix in the Fluvial Sediment Transport overlay (Concept A), and 2) an alternative example implementation of HEFR matrix under consideration by the Sabine/Neches BBEST (Concept B). He explained that the use of concept A could result in under-estimation of future flows and over-estimation of the probability for channel instability and/or inadequate sediment inflows to the Sabine Lake Estuary and with the use of concept B only such flows as reasonably expected to be appropriated and consumptively used in the future need to be removed from the hydrograph(s) for consideration in the Fluvial Sediment Transport and/or other overlays. He further explained concept B, suggesting that the application of concept B may result in a more realistic portrayal of future flows by accounting for firm yield basis for TCEQ M&I permitting, spills from future reservoirs, legal risks associated with overbank and/or pulse flow releases from new reservoirs, and other factors (e.g., return flows, maximum rates for run-of-river diversions, projected demands, etc.).

SB 3 Implementation Issues/SAC role

Chairman Huston noted that the purpose of the implementation discussion was to identify potential implementation questions, if any, that the SAC should attempt to address or provide guidance on. He had distributed to the SAC members a document entitled: "Potential Discussion Items regarding SB 3 Implementation/SAC Role" as a starting point for this discussion. The document was not to be considered as limiting~~guidance~~, but rather to present potential items that the SAC might want to discuss. SAC member Mary Kelly commented that this document was a good starting point and echoed Chairman Huston that some items in the document could be prioritized as initial concepts the SAC should look into (for example, the work plan discussion can be a lower priority due to the statutory time line). She suggested the SAC look into what are the right protocols for translating HEFR results into a time series framework. Chairman Huston also suggested another topic of importance: what is the proper role of modeling of future conditions in the development and evaluation of environmental flow

regime recommendations and how could the SAC support the Basin Stakeholder groups as they address this issue. The SAC then began to discuss and prioritize the topics provided in the "Implementation" handout and agreed to form subgroups to work on different topics regarding interaction and interpretation to be discussed further at the next SAC meeting. The application of environmental flow regimes, i.e. the work plan, could be discussed at a later date.

The members agreed that it would be beneficial for certain SAC members to attend the upcoming BBEST workshops and subcommittee meetings, and have the BBESTs give a report to the SAC during the October meeting.

Water Quality overlay deliverable

SAC member Paul Jensen gave an overview of the draft Water Quality Overlay document and the process in which it was developed, including recent revisions and additions. He discussed several topics included in the document. He stated that it was appropriate to consider the 7Q2 value in the HEFR model in the absence of major stream modifications such as return flows, impoundments or diversions. He also noted that the water quality attainment status of the various reaches be considered and that the environmental flow recommendations may help mitigate any impairments. He suggested that as the HEFR, or other, processes are applied, and if the results are significantly different from existing conditions, the groups must determine how the results/flow recommendations will affect water quality conditions. The SAC set a schedule for comments and revisions to the water quality document that allowed the next draft to be distributed around the end of September/early October that would allow subsequent review time for members prior to the October SAC meeting.

Report on Drill-down Contract Results

Tim Osting, Espey Consultants, gave an overview of the work he's performed on the ecological "drill down" task for the San Jacinto Basin. He explained that his task was to develop a matrix of fish and mussel species as well as produce a report that included a list of focal species and their relationship to flow and the other components of an environmental flow regime, e.g. water quality, geomorphology, etc. His work was concentrated around the priority gage areas determined by the BBEST. He then gave an overview of species distribution over time, included a discussion of focal components and discussed the challenges in using that information. He described the flow components of an environmental flow regime and explained how it applied to the flow matrix/HEFR output concept. He then gave a schedule for completion, noting the final report was due on September 21, 2009 and comments would be accepted through September 14, 2009.

George Guillen, University of Houston Clear Lake and Trinity/San Jacinto BBEST member, also gave an overview of the work he has performed on the ecological "drill down" task for the Trinity Basin. He explained his project objectives which included producing a report that compiles and summarizes available ecological information to be used to guide the development of the instream flow recommendations for the Trinity River, Produce summary report that includes graphical representations and tabular information revealing key relationships between flow variation and the ecological indicators, and the construction of a species occurrence matrix documenting when available, the location of various fish and aquatic species. He noted the tasks completed to date and explained that the data would be presented in both and Access

database and EndNote annotated bibliography that would be key word searchable. He also described the flow components of an environmental flow regime and explained how the biological data discovered in this effort could be applied.

Chairman Huston noted that comments would need to be provided to both Tim Osting and George Guillen as soon as possible so they may be able to complete their reports in a timely manner.

Public comments

Dan Opdyke, TPWD, asked the SAC if it would be appropriate to attempt to modify and enhance the HEFR model now that the BBESTs and their contractors have had an opportunity to put it into use. The SAC agreed to postpone this task to a later date.

Glenda Callaway, Trinity/San Jacinto Stakeholder member, expressed concern over the implementation issue, noting that there will be data gaps and analysis that can not be done. To that end, she would like for the SAC to address this issue. Chairman Huston agreed that the SAC would be looking into the issue.

Next Meeting (October 7) Agenda

The next SAC meeting will be held on October 7, 2009 at TPWD's Airport Commerce facility and with the following meeting to be held on November 4, 2009 at the TWDB.
Potential items for the October meeting include:

- BBEST Updates
- Discussion of the draft Implementation document
- NWF Rangia study update

Meeting Adjourned